

### **What is claimed is:**

[Claim 1] A gas injection apparatus, comprising:

a tubular member defining an axial bore therethrough, the axial bore adapted to deliver a gas into a wellbore proximate a perforation interval via an orifice; and

a gas lift valve attached to the tubular member, the gas lift valve adapted to regulate communication between the axial bore of the tubular member and the wellbore via the orifice.

[Claim 2] The gas injection apparatus of claim 1, wherein the tubular member is adapted to engage a sealing mechanism, the sealing mechanism adapted to seal the wellbore above the perforation interval.

[Claim 3] The gas injection apparatus of claim 1, wherein the sealing mechanism is a dual-port packer.

[Claim 4] The gas injection apparatus of claim 1, wherein the tubular member is adapted to inject a gas proximate the perforation interval of a gas-bearing well.

[Claim 5] The gas injection apparatus of claim 1, wherein the tubular member is adapted to inject a gas proximate the perforation interval of an oil-bearing well.

[Claim 6] The gas injection apparatus of claim 1, further comprising a retrieving element attached to the tubular member.

[Claim 7] A gas lift system for use in producing a well having a perforation interval, the system comprising:

a sealing mechanism adapted to seal the well at a location above the perforation interval, the sealing mechanism having two ports therein;

a tubular string adapted to produce the well from the

- 5 perforation interval via one port in the sealing mechanism; and  
an injection tool adapted to deliver gas into the well proximate the perforation interval via the other port in the sealing mechanism, the injection tool having one or more gas lift valves for injecting a gas into the well below at a location  
10 above the sealing mechanism.

[Claim 8] The gas lift system of claim 7, wherein the tubular string comprises one or more gas lift valves for injecting a gas into the well at a location above the sealing mechanism.

- 15 [Claim 9] The gas lift system of claim 7, wherein the sealing mechanism is a dual-port packer.

[Claim 10] The gas lift system of claim 7, wherein the well is a gas-bearing well.

- 20 [Claim 11] The gas lift system of claim 7, wherein the well is an oil-bearing well.

[Claim 12] A method for producing a well having a perforation interval proximate a formation, comprising:  
injecting gas into the well proximate the perforation interval.

- 25 [Claim 13] A method for unloading an accumulated liquid from a well having a perforation interval proximate a gas-bearing formation, wherein hydrostatic pressure of the

accumulated liquid exceeds pressure of produced gas, the method comprising:

sealing the formation in the well at a location above the perforation interval;

- 5 providing a tubing string for establishing communication between surface and a point below the sealing location; providing a gas injection tool having a gas lift valve for establishing communication between a point above the sealing location and the perforation interval below the sealing location;
- 10 delivering gas into the well proximate the perforation interval via the gas injection tool to decrease the hydrostatic pressure of the accumulated liquid to a level sufficient to permit gas to be produced from the formation; and removing the accumulated liquid and gas from the well via the
- 15 tubing string.

[Claim 14] A gas lift system for use in producing a well having perforations proximate a gas-bearing formation, the system comprising:

- a dual-port packer adapted to seal the well at a location above
- 20 the perforations, the sealing mechanism having two ports therein;
- a tubing string adapted to deliver gas from the perforations proximate the formation via one port in the packer to a surface location; and
- 25 an injection tool adapted to deliver gas from a surface location into the well proximate the perforations via the other port in the packer, the injection tool having a gas lift valve for

injecting a gas into the well below at a location above the sealing mechanism.